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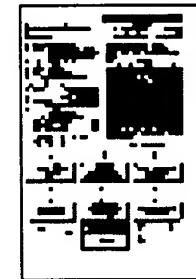
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MORITA TERUYOSHI;**Assignee:** MATSUSHITA ELECTRIC IND CO LTD  
[News, Profiles, Stocks and More about this company](#)**Published / Filed:** March 26, 1993 / Sept. 17, 1991**Application Number:** JP1991000236040**IPC Code:** H01M 4/64; H01M 4/02; H01M 10/40;**Priority Number:** Sept. 17, 1991 JP1991000236040**Abstract:**

**PURPOSE:** To provide a nonaqueous electrolyte secondary battery excellent in an overdischarge resistant characteristic and safety.

**CONSTITUTION:** In a nonaqueous electrolyte secondary battery which uses lithium-containing composite oxides of transition metals as positive electrode material and a carbonaceous material as negative electrode material, a negative electrode plate 2 which uses nickel, titanium, and stainless steel as core materials is heat treated at temperatures above 180°C. Thereby a very thin oxide film is formed on the surface of the core materials and so elusion of the core materials is prevented even if the electric potential of the negative electrode is raised by an overdischarging device, and thus the capacity of the battery is recovered simply by recharging. The ceiling temperature of the heat treatment is restricted depending on the thermal properties of the core materials and of a binding agent used.

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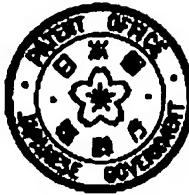
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MORITA TERUYOSHI**

(74) Representative:

**(54) NONAQUEOUS  
ELECTROLYTE  
SECONDARY BATTERY**

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